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14. ABSTRACT

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SEABASING IS ACHIEVABLE TODAY UTILIZING EXISTING CONNECTORS

$\mathbf{b}\mathbf{y}$
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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.
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The concept of seabasing is a topic on the resurgence. Originally a Navy/Marine Corps unique idea, the concept of seabasing today has become truly joint. Each branch of the service either has, or is working on seabasing and high speed connector (HSC) concept documents. This paper addresses the requirements the new HSCs are supposed to offer and then demonstrates that current assets in the military can provide the required capabilities to operate an effective seabase. It explains that new technology is not always the answer and that planners need to look outside the capabilities of each individual service to the broader capabilities the U.S. military offers. Finally, the paper draws conclusions concerning the current concepts of future HSCs and makes recommendations concerning a better way ahead with regards to the use of available funding and future training.

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Intro

The concept of seabasing is a topic on the resurgence. In 2002, Admiral Clark, then Chief of Naval Operations introduced Sea Power 21 which listed "Sea Basing" as one of its four principles. In Sea Power 21, Sea Basing was a Navy/Marine Corps unique idea described as "enhanced operational independence and support for joint forces provided by networked, mobile, and secure sovereign platforms operating in the maritime domain." Since that time the topic of seabasing had faded away but has recently come to the forefront of discussion again with the emphasis on current and future joint operations. In light of the way some countries feel about the United States, acquiring temporary foreign land to set up a base for future joint operations could become difficult placing more importance on our ability to operate an effective seabase.

Seabasing is an agreed upon approach for the future of joint warfare but still has aspects that are only in the conceptual stages. One of the main conceptual ideas is focused around the multi-mission, High Speed Connector(s) (HSC). The HSCs are supposed to offer functionality not currently available to the Joint Force Commander (JFC); fast movement of forces, equipment and supplies from point of origin to the advance base and from the advance base to the seabase. Additionally, the HSCs will be able to link with the replenishment ships and the seabase via various ramp configurations and ultimately deliver assets ashore. The thought is that these new HSCs will provide the combatant commanders with the speed, flexibility, and versatility that is critical in being able to realize the full potential of future maneuver forces.ⁱⁱ

There is no reason to develop new HSCs for seabasing because the Navy, Army and Marine Corps have current assets that meet the HSC "requirements". The capabilities

described in joint publications for the HSCs already exist today throughout the military. The Navy, including the Military Sealift Command (MSC), offers the most capability but the Army and Marine Corps bring other features that when combined, will enable an effective joint seabasing operation. Operational planners need to pull seabasing out of their planning "toolbox" and incorporate it into today's operations.

Background

Sea Basing is not a new idea. In World War II, the successful amphibious operations around Okinawa demonstrated the abilities sustained operations at sea offer a joint force. In 1945 allied forces conducted operations for over 80 days in a huge "seabase" made up of over 1300 vessels ranging from carriers to tugs. "The war in the Pacific could not have been won without mobile logistics support." The use of floating bases was not established doctrine nor was it completely ad hoc. The seabase allowed for maneuver and sustainment of forces just as it is required to do today. It was not called a seabase and the military made do with what they had available at the time. There were no special ships designed or even envisioned to operate from a seabase at this time yet the effort was still effective.

Looking to the future, anti-Americanism, anti-globalization and anti-United States presence in general continue to grow throughout the world. Current events and cultural differences are factors that will make future operational U.S. forward land bases difficult if not impossible in certain parts of the world. In addition, the majority of equipment and supplies required to sustain an operation still travel by sea. When these factors are combined, the concept of operating from a seabase becomes more important today than ever.

The seabase, being a grouping of various surface vessels and their associated aircraft, is the means to preposition forces, equipment and supplies at a safe predetermined distance

from the shore. As part of the seabase, connectors provide the link between the forward operating base and the seabase and between the seabase and shore. Connectors not only provide the initial delivery of logistics between these positions but are also the means by which the forces ashore will receive sustainment from the seabase. With a reduction in its forward deployed forces across Europe and Asia, the U.S. will need to increase its reliance on seabased prepositioned forces to rapidly respond to a crisis. Forward deployed forces are only relevant if there is a method to transport them from the advance base or seabase to shore. Connectors, whether surface or air, fill the requirement and become the method to move forces from the advance base to the seabase and ultimately to shore.

Taking into account the new joint perspective on seabasing over the recent years, the definition of seabasing has been modified to encompass operations pertaining to true joint warfare vice the original naval centric strategy. As defined by the Seabasing Joint Integration Concept (JIC), "...seabasing is the rapid deployment, assembly, command, projection, reconstitution, and re-employment of joint combat power from the sea, while providing continuous support, sustainment, and force protection to select expeditionary joint forces without reliance on land bases within the joint operations area (JOA). These capabilities expand operational maneuver options and facilitate assured access and entry from the sea." Operational maneuver continues to be a fundamental factor to military success. Utilizing the seabase and associated vessels and current connectors will allow the JFC to "exploit the largest maneuver area on the face of the earth: the sea."

Discussion/Argument

As the military progresses with the concept of joint seabasing, each service is developing their own document stating their envisioned transportation needs. Whether its

speed, cargo capacity, troop capacity, roll-on/roll-off capabilities, littoral accessibility or other, each service has plans for new HSCs as they transform with the guidance provided in the National Defense Strategy of 2004. Included in this document is the transformational idea of future operations which includes: "Operating from international waters and airspace"; and "projecting and sustaining US forces in distant anti-access environments". Looking at the U.S. capabilities and actions from WWII to the present, calling this idea (seabasing) "transformational" is a stretch; we have the capability now.

Also in 2004, the Deputy Chief of Naval Operations and the U.S. Marine Corps

Deputy Commandant of Combat Development signed the *High Speed Connectors Enabling Concept*. In this document it is stated that high speed connectors operating from a seabase "will be a working cornerstone of future operational strategies from humanitarian assistance and disaster relief, through major combat operations." These capabilities exist today but are being overlooked based on a faulty assumption that new technology is needed.

Moving from the original Navy/Marine Corps concept of seabasing to today's joint vision, the U.S. Army has begun to look down the path of seabasing and the capabilities that will be required by the future modular military force. In the draft document *U.S. Army Contributions to Joint Land Operations from a Joint Seabase*, the Army suggests that to gain maximum effectiveness of the sea base, "synchronization with other means of projection is required to enhance the strategic and operational responsiveness throughout the operational spectrum." "The Army perspective on seabasing reflects a scalable capability that expands the Joint Force Commander's options to conduct operational maneuver from strategic distances by rapidly projecting power from over-the-horizon to not only seize the initiative, but rapidly transition to decisive operations, and sustain extended operations throughout the

campaign". Making full use of all the available assets of today, seabasing provides the capabilities required for successful army operations throughout the range of military operations (ROMO).

In an interview with CDR Mark Becker, the Navy Warfare Development Command's (NWDC) seabasing pillar lead, he stated that "New technology is not always the answer. Looking at new ways to use existing technology can make up for perceived material deficiencies. Rebalancing the Mobility Triad by determining the correct balance of airlift, sealift, and prepositioned lift to support the National Defense Strategy will enable seabasing to continue to be effective in future operations." Utilizing all available assets throughout the military in a truly joint seabase is a major portion of the rebalancing that needs to happen.

Each branch of the U.S. military that will be involved in seabasing has their own replenishment and/or forward positioned assets. HSCs need to be truly joint and capable of interfacing with each of the service's assets as well as being able to carry out service specific and joint operations. Particularly, these future HSCs are described as being distinguished from other current shipping and military platforms by four features:

- High-speed maneuver over operational ranges
- At-sea, ship-to-ship interface capability
- Increased littoral access
- Multi-mission, high-payload mission deckxii

High-speed maneuver over operational ranges

High-speed maneuver over operational ranges is described as speed in excess of 40 knots. xiii This intra-theater asset should be capable of delivering large payloads from the

advanced base to the seabase and will be critical in delivering high priority supplies throughout the seabase or to shore. xiv

The implementation of seabasing is dependent upon reliable and survivable surface and aircraft able to deliver logistics support where and when needed. The High Speed Vessel (HSV) is a recent innovation that is being employed right now. With the primary mission of mine countermeasures, HSV Swift is also being used as a test platform for sea basing. The HSV is capable of transporting approximately 1,000 passengers along with more than 400 tons of cargo at a max speed of 45 knots to a maximum distance of 3500 nautical miles making it both inter and intra-theater capable.** The cargo deck can easily hold the numerous supplies, trucks, combat vehicles, tractor-trailers, water tankers, and other equipment needed by Army or Marine forces. It operates as a seabase to shore or shore to shore asset reducing reliance on airlift. The HSV's ability to carry a heavy payload, quickly deliver it to the shore and then quickly leave the operations area while permitting the larger vessels to remain over the horizon makes it a highly desirable platform for seabasing.**

The HSVs used by the U.S. to this point have been leased vessels in an experimental phase to determine their usefulness. With very promising trials, the military has decided to pursue acquiring their own HSVs which has led to the conceptual Joint High Speed Vessel (JHSV). The JHSV is expected to meet the requirements of a HSC and will eventually take the place of Swift.

In addition to the HSV, the navy also has Fast Sealift Ships (FSS) available but currently not in use. The SL-7 type FSS, nearly the length of an aircraft carrier, is capable of sustained speeds of 35 knots and is the fastest cargo ship ever built.^{xvii} Although not capable

of reaching the 40 knot speed desired with a new HSC, this asset is available now and could be used in place of the proposed new HSC.

Currently in the military inventory are eight T-AKR SL-7 type FSS. They are currently kept in a Reduced Operating Status (ROS) but can be activated within 96 hours as was done during DESERT SHIELD and DESERT STORM. The price of the price o

The Osprey is a Marine Corps aircraft, medium lift, vertical/short takeoff and landing (VSTOL) platform. Capable of self deploying to the theater or being carried by the carrier strike group (CSG) or expeditionary strike group (ESG), it is another valuable asset for the JFC as part of the seabase. Taking the place of the CH-53 class helicopter the Osprey offers more speed and range than its predecessor. The future CH-53K is planned to have a 110 nautical mile range whereas the Osprey flies twice as fast and three times farther when combat loaded.^{xx} The Osprey provides the high speed air bridge for ship to ship and ship to shore movement of troops and supplies and will be the preferred seabased air asset for future operations.

At-sea, ship-to-ship interface capability

The *High Speed Connector Enabling Concept* describes the second HSC feature, the at-sea, ship-to-ship interface capability as "the emerging ship to ship transfer technology providing enhanced capability to conduct the at sea transfer of personnel, equipment and supplies between various ship platforms utilizing air or surface interface." Taking into account that a seabase will be made up of a large number of different ships from across the entire U.S. inventory and considering all the different configurations that the seabase will have to work with, a multi-use transfer platform is required to optimize the capabilities the seabase offers. Having the capability to offload prepositioning ships at sea away from possible hostile shores provides security for the assets being moved, enhances force protection and provides the JFC with flexibility in conducting the offloads when the timing works the best. Although I agree that it is an important capability, the ability is not "emerging" – it's here now.

In a March 2008 exercise to demonstrate the Navy's real world application of the seabasing concept, a Maritime Prepositioning Ship Squadron (MPSRON) assembled their Improved Navy Lighterage System (INLS) and transferred cargo from the MSC ships, including trucks, equipment and humanitarian aid supplies, to HSV Swift. The INLS is a roll-on/roll-off (RO/RO) discharge platform comprised of barges and ferries that allow ships to off-load cargo at sea and deliver it ashore when traditional harbor facilities are unavailable. Swift, who was docked on the platform, then transported the material to shore for further movement to its final destination. MPSRON 1's commander, Captain Clay Saunders said "The opportunity to validate our seabase concept and exercise our shipto-shore capabilities really demonstrates the broad capabilities of our prepositioned force."

In addition to the INLS, the SL-7 previously discussed for its 35 knot speed, is a capable roll-on/roll-off and lift-on/lift-off ship equipped with on-board cranes and self-contained ramps making them especially well suited to transport and transfer heavy or bulky equipment such as tanks, large wheeled vehicles and helicopters. Further uses of their capabilities allow the ships to off-load onto various other ship configurations. This can be done while anchored at sea or in ports where shore facilities for unloading equipment are unavailable. At the yearly cost of \$4 million each to maintain these ships in ROS, they would better serve the military and JFC by being deployed and as a part of the seabase.

The Osprey is another option for ship to ship transfers on a smaller scale. This aircraft is a perfect means to quickly transfer personnel, supplies and small equipment between vessels throughout the seabase. It can land on the larger platforms or hover above the smaller ships while loading and unloading. It also provides the time saving advantage of not having to maneuver ships to connect with a platform for every transfer.

Increased littoral access

The third feature envisioned for a HSC is increased littoral access. Future operations are expected to be in anti-access environments which will place more importance on shallow draft vessels with good maneuverability and varying ramp positions for loading and unloading. Based on the fact that the *High Speed Connector Enabling Concept* is a navymarine corps document, it does not appear to take into account the army assets available to carry out this mission in a joint seabase operation.

Currently in the category of littoral access watercraft are the navy's Landing Craft Air Cushioned (LCAC) and the army's Landing Craft Utility (LCU) and Logistics Support Vessel (LSV). Characteristics of these vessels make them desirable platforms to operate with

a joint seabase. The LCAC is characterized as a high-speed (40 plus knots with a full load), over-the-beach fully amphibious landing craft typically used to transport U.S. Marine personnel from ship to shore and across the beach. Based on its load capacity, it can carry cargo and heavy equipment to include the M-1 Abrams Main Battle Tank. The speed and technology built into the LCAC increases the ability of joint forces "to reach more than 70 percent of the world's coastline safely, while only about 15 percent is accessible by conventional landing craft."

The LCU was designed to move containers, general cargo and vehicles from ships at sea to the shore, performing the army mission of Logistics Over The Shore (LOTS). The LCU is also suitable for the intra-theater movement of cargo along coastlines or inland waterways to include unit deployment and relocation in remote areas with austere shore facilities or unimproved beaches. Its ramp allows for RO/RO capabilities and the vessel is able to perform its own beach extraction via an onboard bow thruster. Its ability to carry and deliver to the shore loads as large as five M1 main battle tanks or 24 double-stacked 20-foot ISO containers make it a valuable asset for seabasing despite its speed of only 12 knots.

The LSV is the Army's largest powered watercraft. Designed to carry up to 2,000 tons of cargo from sealift ships to shore, these vessels are critical force projection enablers. **xxiii* Capable of beaching themselves on shore to drop off cargo and then returning to the sea, the LSV is a true littoral vessel that should be included in joint seabase planning. LSV's are also RO/RO capable and carry out the LOTS function. **xxiv** They transport heavy cargo including vehicles and general cargo. An example of their carrying capacity is 24 M1 main battle tanks or 50 double-stacked 20-foot ISO containers. **xxv** Although only capable of speeds around 12 knots, these vessels fulfill the requirement for littoral access today. Planning appropriately

and using a mix of available vessels will overcome the speed shortfalls of the LCU and LSV and ensure the most desired supplies are delivered via the fastest means while still utilizing slower vessels for heavy cargo movement.

Also filling the littoral role is the MV-22 Osprey previously discussed for its speed as a seabase connector. The Osprey is capable of transporting 24 combat loaded forces or 10,000 pounds of external cargo to austere landing sites. Another proven asset available today, the Osprey offers the JFC flexibility in delivering logistics from the seabase to shore or forward to land positions not previously reachable by helicopter.

Multi-mission, high-payload mission deck

The last of the four features described in the HSC enabling concept is the multimission, high-payload mission deck. The HSC should have a "reconfigurable mission deck capable of transporting vehicles and heavy cargo, a flexible ramp system to allow for loading/unloading of wheeled and tracked vehicles, containers or rotary wing assets."

As previously discussed, the HSV, SL-7, LCU and LSV all have multi-mission, high payload decks. The vision of loading a particular containerized mission package on the vessel is achievable with all of these assets. The speed required for the particular mission and asset availability will determine which of these platforms, as part of the seabase, will perform the task. If speed is the main concern and travel between the advanced base and seabase is required, the LSV and LCU would be the last choices but with speeds between 35 and 45 knots, the SL-7 or HSV would perform well.

The HSV, INLS, SL-7, LCAC, LSV, LCU and MV-22 offer many combinations of platforms that provide all four features described for the future HSCs. These capabilities are here now and are capable of carrying out the mission of a joint seabase.

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Although not a separately stated feature of HSCs, they are expected to be a major contributor in responding to Humanitarian Assistance/Disaster Relief (HA/DR) needs and non-combatant evacuation operations (NEO). The rapid deployment of forces to respond to these situations as well as the means to evacuate large groups of personnel back to the safety of the seabase make the HSV ideal for these operations. HSV Swift has already proven its usefulness in HA/DR situations. In 2006, Swift was used to transport Humanitarian Assistance materials to Beirut and also was used to provide logistical assistance during the tsunami relief effort in North Sumatra. In cases where Swift is unavailable and JHSVs have not yet entered the fleet, the use of multiple LCAC or LCU vessels will meet the HA/DR and NEO requirements.

Depending on the size of future operations, a concern might be that current assets will not be able to sustain the forces ashore for an indefinite amount of time. This concern was addressed in 2007 by a RAND study and results show that current assets are more than capable of meeting the need. Analysis in the study indicates that a seabase maneuver element (the portion of a MEB projected ashore) could be sustained up to 110 NM from the seabase using only CH-53K and MV-22 aircraft. When support for an Army airborne brigade is added, "the use of LCACs would be required to sustain these larger numbers of forces at greater distances."xl

With the multitude of platforms available today, delivering force sustainment material ashore is no longer a concern. Moving logistics from a platform at sea to the beach or further inland are capabilities that exist now. The data in the RAND study along with the March 2008 seabasing exercise discussed earlier demonstrate that seabasing today, using current assets provides the JFC with the tools he needs to carry out the mission and achieve the

objective. Seabasing has been proven effective and the assets available today fulfill the requirements of future conceptual HSCs. Planners need to incorporate seabasing in today's operations and take advantage of the military's capabilities.

Counter Argument

There are those who would argue that HSCs are supposed to be transformational and combine the traits of multiple platforms into one multifunctional platform. It is true that besides the HSV, current capabilities require multiple assets to perform the missions an HSC is supposed to be capable of on its own. From a funding standpoint, the assets capable of meeting the HSC requirements are here now so it doesn't make fiscal sense to fund development of a new platform that will accomplish the same task. Historically, when developing a new vessel, the first one goes well over budget and changes are required on subsequent craft increasing the need for funding even further. For these reasons, it would make more sense to use the funding to increase the number of current, proven assets to allow for even more operational flexibility.

Looked at from a functional aspect, having multiple platforms loaded with different mission packages ready at a moment's notice provides more flexibility then having to reconfigure the limited number of HSCs that will be available at the seabase. Another benefit of having multiple platforms is that in the event one vessel is lost, the impact on the seabase is minimal compared to losing a future HSC.

Others would argue that current assets are not enough to operate multiple seabases simultaneously – specifically the fact that there is only one HSV. Discussed above, the HSV currently in the navy's inventory is a leased vessel. Now that it has proven its effectiveness in multiple roles, plans are underway to procure JHSVs. Based on HSV Swift, these new

JHSVs will provide even more operational flexibility with increased mission package capabilities. The *JHSV Concept of Operations* states that the JHSV "will be first and foremost an intra-theater maneuver force transportation and logistics platform capable of 35 knots or greater."^{xli}

Until the JHSV joins the fleet, leasing additional HSVs to support multiple seabases is always an option but should not be needed with eight available SL-7 FSS. Working in combination with the Osprey and LCAC, the SL-7 will provide the speed needed for intratheater maneuver.

Conclusion

Future military operations will continue to require the utmost dedication and sacrifice of our forces under adverse conditions. Our joint forces, composed of true professionals armed with courage, stamina, and intellect, operating the vehicles of today will succeed despite the complexity of future operations. The seabase will provide the means to sustain forces for prolonged periods from a safe distance. Utilizing existing vessels capable of operating inter-theater, intra-theater, in the littorals and performing humanitarian assistance if needed will provide the versatility. With assets currently under his control, a JFC can strike at the place and time of his choosing, delivering forces to the area with their supplies via the seabase and without established bases on the shore. Current, proven and well developed assets of today do what they are supposed to do - support the forces.

New HSCs are not needed to conduct effective seabasing. Looking back at the JIC definition of seabasing "...seabasing is the rapid deployment, assembly, command, projection, reconstitution, and re-employment of joint combat power from the sea, while

providing continuous support and sustainment to select expeditionary joint forces without reliance on land bases within the joint operations area (JOA). These capabilities expand operational maneuver options and facilitate assured access and entry from the sea." The capabilities described in the definition exist today to accomplish the mission.

Rather than working to create new technology, reapplying the way we use current technology, ensuring we take full advantage of the capabilities these different platforms offer vice what they were originally developed for, extends the JFCs flexibility in conducting operations. Current assets such as the HSV, INLS, MV-22, LCAC, SL-7, LSV and LCU make seabasing a reality today and will continue to provide the JFC with the operational flexibility needed to carry out the objective in future operations.

Recommendation

Although independent studies and recent exercises demonstrate that current assets are capable of performing effective seabasing, more and larger exercises should take place with joint forces to fully test the operational flexibility of the different platforms. Testing to this point has been largely a Navy-Marine Corps centric evolution. Bringing in the Army and the vessels they provide will allow a more realistic joint seabase test and prove the effectiveness of current assets. The U.S. military needs to train like they will fight and in a true joint seabase operation, each service will bring assets that when combined will provide all the capabilities of the proposed HSCs.

Additionally, funding currently being established for future HSC development should be put towards acquiring additional quantities of already established seabasing platforms.

With the functionality the HSV Swift offers, moving forward with procuring the JHSV as the evolutionary next step from HSV Swift will be a benefit for future operations.

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